witnessed this phenomenon and observations thereof?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY, SPACE AND MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVENESH CHATURVEDI): (a) The 21 fragments of the Comet Shoemaker-Levy 9 started colliding with Jupiter in sequence from 00.56 hours (1ST) on July 17 and the final major fragment impacted at 13.11 hours on July 22, 1994. These astronomical events were powerful and caused visible effects on the Jovian atmospher such as change in the intensity of methane bands and emission of intense radiation from heated clouds of gas which mushroomed above the atmosphere. The event also left prominent changes on the visible appearance of the atmosphere of the planet. As per available information, no environmental effects are perceived on our earth.

(b) In India, the following observatories are involved in the programme of observations and analysis:

(i) Vainu Bappu Observatory, Kavalur, (Karnataka) of the Indian Institute of Astrophysics, (IIA) Bangalore

(ii) Kodaikanal Observatory of IIA.

(iii) Gauribidanur Observatory of IIA.

(iv) Japal Rangapur Observatory at Osmania University.

(v) Ooty Radio Telescope

(vi) Giant Meterwave Radio Telescope (GMRT) Pune

(vii) Uttar Pradesh State Observatory (UPSO), Nainital

The photographs obtained show the dark regions of crash sites on Jupiter. The Raman Research Institute, Bangalore also observed several fold increase in the microwave emission of Jupiter, lasting a few minutes after the impact of the Ecomponent.

The Other Institutions similarly involved include Physical Research Laboratory, Ahmedabad; National Physical Laboratory, New Delhi and Tata Institute of Fundamental Research, Bombay.

Seismic Study of Delhi

3245. SHRI RAMDAS AGARWAL:
SHRI SATISH AGARWAL:

Will the PRIME MINISTER be pleased to state:

(a) Whether it is a fact that Delhi falls in Seismic Zone 4 (four) where earthquake magnitude can range from 4 to 7 on the richter scale indicating the lowest/highest magnitude recorded till the end of July, 1994 for the last three years, indicating the areas susceptible to damage in the capital;

(b) whether Government have asked any Scientific Team to undertake study of seismicity and soil behaviour in Delhi with a view to identify zones vulnerable to earthquake damage as reported in the Hindustan Times dated 1st August, 1994;

(c) if so, whether such team will take into account similar type of studies undertaken by other foreign countries particularly in Asia;

(d) whether the proposed study is a first of its kind in India; and

(e) if so, what remedial steps Government have so far taken or propose to take to protect residential/critical buildings to avoid sudden loss and untimely casualties indicating by when the study Report is likely to be submitted to Government so that other states in the country may equally be benefited by its findings?

THE MINISTER OF STATE IN THE PRIME MINISTER'S OFFICE AND MINISTER OF STATE IN THE DEPARTMENTS OF ATOMIC ENERGY, SPACE AND MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BHUVENESH CHATURVEDI): (a) Yes, Sir, it is a fact that Delhi falls in seismic zone IV as per the Indian standard code, IS: 1893-1984. Delhi has witnessed small earthquakes of magnitude around 4 in the recent past. Earthquakes of magnitude 3.5 & 4 occurred respectively on 21.3.93 and 28.7.94. Historically also earthquakes of low to moderate intensity have occurred around Delhi. Analysis of the data has indicated that the seismic activity is mainly

located near Sohna, Gurgaon, Rohtak and Sonepat.

(b) to (e) An inter-departmental Expert Committee has been set up to work out details regarding preparation of first order microzonation map of Delhi area based on the available data on seismicity, seismotectonic & geotechnical aspects and typology of construction.

The Committee is examining the available data for evolving specific studies to be undertaken. It is expected that these studies will help in identifying the relative vulnerability of different zones and remedial measures. The studies will take into account results of similar work done in other countries.

12.00 NOON

[The Deputy Chairman in the Chair]

PAPERS LAID ON THE TABLE

Memorandum of Understnding (1994-95) between the Government of India andn Computer Maintenance Corporation Limited and E.T. and T. Corporation Limited

THE MINISTER OF STATE IN THE MINISTRY OF CHEMICALS AND FERTILIZERS WITH ADDITIONAL CHARGE OF THE MINISTER OF STATE IN THE MINISTRY OF PARLIAMENTARY AFFAIRS AND THE MINISTER OF STATE IN THE DEPARTMENT OF ELECTRONICS AND THE DEPARTMENT OF OCEAN DEVELOPMENT (SHRI EDUARDO FALEIRO): Madam, I lay on the Table a copy each (in English and Hindi) of the following papers:—

(i) Memorandum of Understanding between the Government of India (Department of Electronics) and the Computer Maintenance Corporation Limited for the year 1994-95. [Placed in Library. *See* No. LT-625; '94]

(ii) Memorandum of Understanding between the Government of India (Department of Electronics) and the E.T. and T. Corporation Limited for the year 1994-95. [Placed in Library. *See* No. LT-6289/94]

Notification of the Ministry of Law, Justice and Company Affairs (Department of Justice)

THE MINISTER OF STATE IN THE MINISTRY OF LAW, JUSTICE AND COMPANY AFFAIRS (SHRI HANSRAJ BHARDWAJ): Madam, I lay on the Table, under sub-section (3) of section 24 of the High Court Judges (Conditions of Service) Act, 1954, a copy (in English and Hindi) of the Ministry of Law, Justice and Company Affairs (Department of Justice) Notification G.S.R. No. 558(E), dated the 2nd July, 1994, publishing the High Court Judges (Amendment) Rules, 1994. (Placed in Library. *See No.* LT-6291/94)

I. Report and Accounts (1992-93) of the Cement Corporation of India Limited, New Delhi and related papers. II. Report and Accounts (1991-92) of the Damodar Cement and Slag Limited, Calcutta and related papers.

THE MINISTER OF STATE IN THE MINISTRY OF INDUSTRY (DEPARTMENT OF INDUSTRIAL DEVELOPMENT) AND THE MINISTER OF STATE IN THE MINISTRY OF INDUSTRY (DEPARTMENT OF HEAVY INDUSTRY) (SHRIMATI KRISHNA SAHI): Madam, I lay on the Table-

(1) A copy each (in English and Hindi) of the following papers, under subsection (1) of section 619A of the Companies Act, 1956:—

(I) (a) Twenty-ninth Annual Report and Accounts of the Cement Corporation of India Limited, New Delhi, for the year 1992-93, together with the Auditors' Report on the Accountsand the comments of the Comptroller and Auditor General of India thereon, (b) Statement by Government accepting the above Report. [Placed in Library. See No. LT-6292/94]

(II) (a) Annual Report and Accounts of the Damodar Cement and Slag Limited, Calcutta, for the year